

Stewart, as a reason and an excuse for the suggestion of an occasional article such as the present note will help to form, it is not for me to point out to you. I will, therefore, without further general comment or apology, proceed with the subject of my present note on the progress of agriculture.

In a notice which you took, on 7th September, 1850, of a pamphlet, by Lord Willoughby de Eresby, on his ploughing machine, it is expressed as your belief—

"That an era of agricultural development, as vast and wonderful as that which the present age has already witnessed in manufactures, is not only within the bounds of possibility, but on the eve of advent,—that a time is at hand when our present primitive agricultural implements will be put away as curiosities beside the distaff and the spinning-wheel,—and that the alleged discovery by Daguerre of a mode of rearing three-year plants in three months,—the reported power of some of our market-gardeners to rear a salad (like a mushroom) in a single night,—the alleged power of the Japanese to dwarf the lofty pine into a miniature tree, a few inches only in height,—the traditional story of the monks of Glastonbury Abbey, who could make the hawthorn bloom at Christmas,—or even the trick of the Indian jugglers, who appear to cause a mango seed to spring up out of the soil in course of a few hours, and before the eyes of hundreds, unfolding leaves and flowers and fruit,—are all but, at the worst, vaticinary imaginings, or rudimentary typifying ideas, of actual powers of nature, scarcely less wonderful, and yet to be developed; just as was the old traditional idea of the magnetic telegraph of separated friends, with its needles and alphabets, but without any record of its invisible connecting wire,—alone wanting to reduce it all to credibility. Believing, at all events, as we decidedly do, that a great era of agricultural development is at hand, when even the steam-plough, as it at present exists, may be a rude implement; it is interesting, in such belief, to witness just such beginnings of this anticipated era, as were the first steam-engines, or the first spinning and weaving machines, in manufacture—or the locomotive with legs, like a horse, in the railway system."

As if to countenance and corroborate the verisimilitude of these speculative ideas, the *Brussels Herald*, in course of the autumn of the year following on their insertion, that is, of last autumn, reported a strange exhibition of experiments witnessed by Abbé Moigno, whose guarantee, as a "conscientious writer," the *Herald* evidences. In these experiments, which are minutely detailed, it is declared that, by means of a reddish liquid, florists' plants of many different kinds were made to develop and open their buds into full flower, in the presence of a number of spectators invited for the purpose by M. Hebert, the horticulturist or experimenter. I allude to this, however, merely by the way: the report may be a hoax altogether, for all that I know; and, if so, may doubtless be based on or suggested by your own remarks just quoted: it is at least curious, however, and worth noting in this connection; but what I meant to follow up the quotation just given with was not this singular report, but one of a much more authentic description, and in reference to certain little experiments of my own.

Plants are subject to what is called a "sport," and it has been found that if that sport be followed up, it may be not only established as a distinct variety, but be made to yield further sports (or developments, rather, as it would really appear), to which it is found to be peculiarly liable. Acting on these facts, a M. Fabre, according to the *Gardeners' Chronicle* itself—to which I must now appeal—has actually succeeded in developing perfect and excellent wheat from one of the common grasses, liable to a sport of which he took advantage by carefully sowing its seeds, and rearing, and again sowing the most remarkable and most developed of the plants so yielded; and thus in twelve successive seasons, developing substantial wheat.

Now, could agriculturists or horticulturists only discover the means of causing or compelling cereals or other useful plants of any description to "sport" at will, immense and rapid improvements might be speedily looked for in the crops already realised; and one of my chief objects in preparing this note was to suggest

means whereby this very desirable power may probably be at once obtained.

Being aware that varieties of flowers are often fixed "sports," and having heard from a gardener in the secret that charcoal has a decided power of invigorating the colour of red flowers, the idea struck me that perhaps charcoal might change the colours of flowers altogether, and so compel them to "sport," and thus enable the horticulturist to obtain seeds liable to further sports and varieties, which might then be fixed in the usual way: thinking, moreover, that the succulent dahlias would be a good subject on which to experiment, I chose two,—a white one, with a very slight pencilling of red along the margin of each leaf, and one of an orange hue. These, after planting their roots, I surrounded with rings of charcoal and awaited the result, which is exactly what I had anticipated. The orange has become a vivid red, and the white has exhibited a singular variety of sports: flowers ranging from a splendid and complete red without a vestige of white, through mixtures of red streaked with white, and of white streaked with red, to some like the original white, have appeared simultaneously on one and the same stem. These results I spoke of to some of the working gardeners at the Zoological Gardens, where there is an immense display of dahlias: they had never produced anything of the kind, but I hope the hint will not be lost on them. The practical conclusion, however, which I would desire to draw from the facts is, that if flowers, and hence their seeds, can be thus or otherwise compelled to "sport," so may the seeds of the cereals and of green crops, such as turnips, potatoes, &c. and thus new, and it may be greatly developed, varieties be permanently obtained. I perceive that it has been lately observed that charcoal has a singular power of invigorating and changing or deepening the green colour of the leaves of the potato plant, and I cannot doubt of its having a like influence on its flower and seed. Our present ears of wheat may, for all that we know, be thus or otherwise developable even to the magnitude of Indian corn; which, I find, by the way, grows hopefully in Old Brompton, into a noble plant at least eight feet high, and yields heads as large as any I have ever seen of foreign growth. Even though it were not possible to ripen this corn thoroughly on the large scale and in average seasons in this country, we know that the Americans prefer it for many purposes in a green state, when it has a delicious milky juice which they turn to great advantage in various shapes on the dinner and supper table. What, then, hinders our horticulturists from rearing it in the meantime as a green crop at least? Were varieties that have been cultivated either in the higher or more elevated or in the more northern districts of America tried, they would doubtless speedily become acclimated, and yield abundant and most profitable farm crops in England.

Even apart, I may add, from any artificial means such as those I have indicated of developing and improving the grains of the cereals or indeed of any plant or vegetable whatever, were industry and perseverance displayed by our agriculturists year after year in choosing the finest seeds or grains of the finest plants; and from the plants yielded by these again selecting only the largest and finest, reiterating this process carefully year after year; I believe that wonderful developments would be the result—developments of which we have as yet little conception.

Our moist Climate and its Evils: the influence of Drainage on it.—Most fervently is it to be hoped that you are right in your expectation (expressed on 3rd April last) that the drainage movement throughout the country, agricultural no less than urban and suburban, will be promoted by the information collected by the Central Board of Health, and of which, at that time, you gave a comprehensive abstract. As then truly remarked—

"By drainage the climate will be ameliorated, and many diseases prevented. It has long been admitted that he who makes two blades of corn grow where only one grew before is a benefactor to

his species. Thorough drainage does more than this. It tends to lengthen life as well as increase the means of living."

The association between that curse of our country, its moist climate, and the prevalence of consumption, and of colds, the fruitful seeds of consumption, is but too well known. Would that anything like a remedy, or even a preventive, were only half as well known. Like epilepsy and hydrophobia, this, as you observe as to the former, "is an opprobrium to the medical profession: they cannot reach it." As to a remedy, however, I have good reason to believe that the faculty are likely now to have it in their power to remove this opprobrium so far as regards various forms of consumption. And it is an interesting circumstance that the hopeful means should emanate from the ultimate source whence so much mischief originates in the dampness of our sea-girt isle—the ocean itself: I allude of course to the use of certain oils obtained from the fishy tribes. My present purpose, however, is to offer aid whom it may concern a hint on the subject of prevention as well as cure. Nothing is more difficult often than to cure even a cold: sometimes it is no less difficult to prevent one; and even the most careful are often surprised to find all their prudence and precaution—whether defensive or offensive—whether simply protective or by braving its advent and hardening the constitution against it—to be of no avail. A recent announcement in the *Lancet*, to the effect that rheumatism and inflammatory ailments of various kinds, including even hemorrhage from the lungs, have been cured in a singularly brief space of time by the simple and palatable agency of lemon juice, emboldens me to mention that lemon juice having been used occasionally for many years by one of the members of my family subject to a scorbutic ailment, and with various collateral benefits of a remarkable, and, at first, of an unlooked-for kind, I am prepared by this and other experience of its benefits, to state that those who dwell either in damp districts or damp houses, and are hence subject to rheumatism, coughs, colds, &c. will find the free use of lemon-juice, where it otherwise does not disagree with them, a most effectual preventive as well as remedy. I have found the regular use of a wine-glassful of two a day so strengthen a very delicate constitution, liable to colds on the slightest occasions, that it in a short time defied not only damp, but every inclemency and all exposure, and, with the subsequent aid of cod liver oil, advised by several physicians, if not, indeed, also partly by means of the lemon-juice, which was simultaneously continued, an individual who was on the brink of the grave has been restored to health and strength.

So far as regards the influence of lemon-juice, it seems reasonable, even *a priori*, to think that if, as declared in the *Lancet*, it speedily cures inflammatory disorders, it ought both to cure and to prevent the access of colds, which are diseases themselves of an inflammatory order.

In the simultaneous or alternate use of two such agents as the vegetable acid and the animal oil in question, there is a much more natural adaptability to the composition of the organism and the blood than there is in strictly medical drugs, amongst which, indeed, these can scarcely be classed at all; and if diseases of so dangerous and obstinate a nature as consumptions, colds, &c. as well as rheumatism and other ills, can be overcome by them or by one or other of them, it is assuredly better to resort to such simple and comparatively, or rather positively, harmless agencies than to the nauseous and horrid contents of the "medicine chest."

J. E. D.

ALLEGED STATUE OF THE DUKES OF BRIDGEWATER.—In consequence of a statement in the newspapers that Lord Ellesmere intended to erect in Manchester a statue of the Dukes of Bridgewater, at a cost of 10,000*l.*, his lordship has publicly contradicted the rumour.